CLAIMS

What is claimed is:

- A method for transplanting cells to a patient in need thereof, comprising:
 - obtaining cells from a donor, a)
 - contacting the cells with an immunoglobulin specific to B7-1, an b) immunoglobulin specific to B7-2 and recipient cells from the patient for a period of time sufficient for tolerance induction, thereby obtaining a mixture, and
 - introducing the mixture to the patient. c)
- The method of Claim 1, wherein the cells from the donor are derived from bone 10 2. marrow or blood.
 - The method of Claim 2, wherein the recipient cell is a lymphocyte. 3.
 - The method of Claim 3, wherein the period of time is between about 12 hours and 4. about 48 hours.
- 15 The method of Claim 4, wherein the period of time is about 36 hours.
 - The method of Claim 1, wherein the patient has a disease that is selected from the 6. group consisting of: a proliferative disease, anemia and myeloid dysplasia syndrome.
- The method of Claim 6, wherein the proliferative disease is selected from the group 20 consisting of: leukemia, lymphoma and cancer.

- 8. The method of Claim 6, wherein the anemia is selected from the group consisting of: sickle-cell anemia, thalassemia and aplastic anemia.
- 9. A method for transplanting cells to a patient in need thereof, comprising:
 - a) obtaining cells from a donor,
 - b) contacting the cells with an immunoglobulin specific to B7-1, an immunoglobulin specific to B7-2, and tissue, organ or cells that express MHC Class I antigen, B7-1 and B7-2 molecules, for a period of time sufficient for tolerance induction, thereby obtaining a mixture, and
 - c) introducing the mixture to the patient.
- 10 10. The method of Claim 9, wherein the cells derived from the donor are derived from bone marrow, stem cells or immature blood cells.

